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the future of the oceans

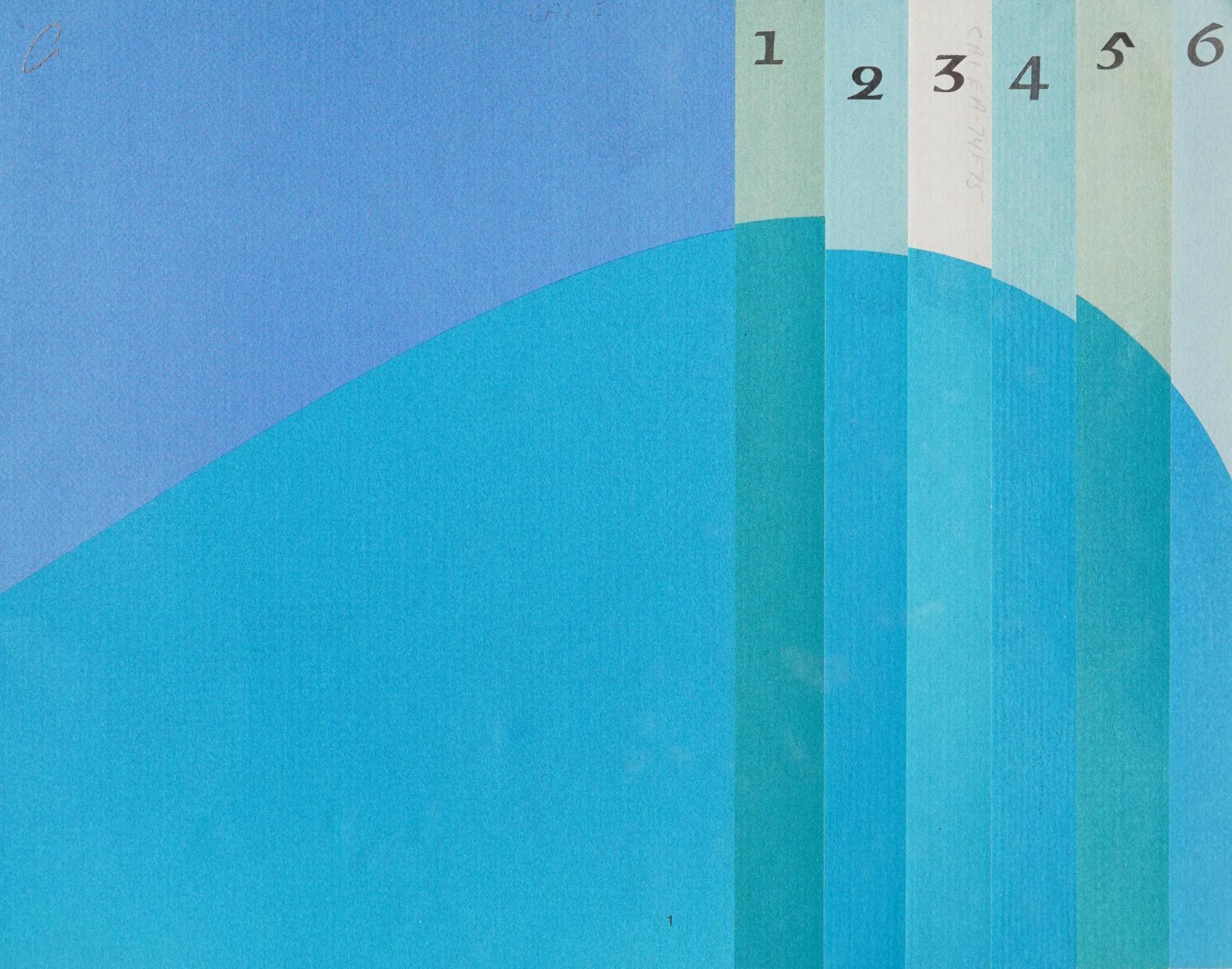
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# *the future of the oceans*

The many changes in nations and technology over past decades have greatly affected the public order of the oceans. For this reason the states of the world convened the Third United Nations Conference on the Law of the Sea—to question the validity of the 300-year-old laws that presently govern the oceans.

This booklet summarizes these major changes, shows the challenges involved in revising the Law of the Sea, and presents Canada's approach to the management and conservation of world marine resources.





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# introduction

Without the oceans that encircle the globe, life as we know it would be unthinkable. The sea is nearly as ancient as the earth itself, about four billion years old. The first, microscopic forms of life were born in the salty warmth of that primeval sea.

With every fish, amphibian and reptile, every warm-blooded bird and mammal, man shares these marine origins. The sea has formed us and shaped much of the land we inhabit. Sea, land and man are linked in bonds of interdependence. We even rely on the oceans for an important part of the oxygen we breathe, and for the stability of the climates that support our existence.

Man's history is equally dependent on the all-providing mother sea. Standing on its shores, primitive man must have looked out upon it with a mixture of awe, excitement and fear. But man conquered his fear of the sea. Out of necessity and sheer adventurousness he learned to harvest it for food, and to navigate its great reaches.

The ability to travel the oceans has had a profound influence on man's destiny. From the time of the Phoenicians and ancient Greeks, sailing has made possible the discovery of far-off lands, the forging of trading and cultural links between widely separated peoples, and, less happily, the creation of empires based on commercial domination or conquest.

## *Freedom of the High Seas*

In fact it was the fierce competition among navies and commercial fleets that made necessary the first international law governing the seas. The maritime powers of the 16th and 17th centuries – Britain,

France, Spain, Portugal and Holland – battled with one another for domination of the sea lanes as they built their far-flung colonial empires, sometimes claiming sovereignty over wide expanses of water. A regime of law was needed to impose some order on their rival claims. And so in 1609, partly as a result of international debates among jurists, partly as a result of the then balance of forces, the doctrine of "the freedom of the high seas" emerged, to be accepted eventually as international practice. That practice, however, has never been quite universal or uniform.

Freedom of the high seas has meant that a nation could exercise sovereignty only over its internal waters and over a narrow belt of ocean around its shores known as the "territorial sea". The limit most generally adhered to for the breadth of the territorial sea was three miles, but from the beginning there were exceptions to this customary rule. Beyond that narrow belt were the high seas. There the freedom of the seas prevailed and the ships of the world could roam at will, subject only to the laws of their respective sovereigns. There fishing was free and open to all, and, in more modern times, all states could lay cables and pipelines and carry out scientific research without interference from others. Early on, however, freedom of the seas was limited to some extent by rules for the prevention of piracy and the suppression of the slave trade.

The two concepts of sovereignty over the territorial sea on the one hand and the freedom of the high seas on the other have remained fundamental to the international law of the sea until the present time. The legal regime based on them developed initially from state practice, that is, the

unilateral actions of one or more states eventually accepted and followed by others. It was not until 1958 that the law of the sea was codified, and to some extent modified, by the then independent nations of the world in the four Geneva Conventions of that year.

This freedom of the seas served colonial powers well. It allowed their vessels to go where they pleased and generally to do what they pleased, except within the narrow territorial seas of other states; and even there they had the right of "innocent passage" for peaceful purposes, such as trade.

At the same time, however, while freedom of the high seas served the narrow interests of the major maritime powers of the day, it served wider international interests as well. It helped preserve peace and order at sea. It stimulated commerce. It opened the minds of men to intellectual horizons other than their own; and it established that we do indeed live in a small and interdependent world. Properly understood and applied, the freedom of the high seas represents one of the greatest achievements of international law and cooperation, and remains as important as ever today to the nations of the world.

In actual practice, however, freedom of the high seas too often has meant freedom for those states with the might to exercise it. Too often the narrow interests it served outweighed the wider ones. And above all, too often it has failed to take into sufficient account new needs and developments.

#### After Grotius

The author of the high seas doctrine, the Dutch jurist Grotius, wrote in 1609:

"Most things become exhausted with promiscuous use. This is not the case with the sea. It can be exhausted neither by fishing nor by navigation, that is to say, in the two ways in which it can be used."

Grotius was right, for his time. He isn't anymore.

During and even before the three decades since 1945, man has found other uses for

the sea besides fishing and ordinary navigation. Today we are:

- drilling the seabed for oil and gas;
- transporting huge quantities of oil and other noxious substances across the oceans in giant tankers or other ships;
- developing means of mining the abyssal seabed for minerals such as nickel, copper and cobalt;
- using the sea as a dumping ground for human and industrial wastes, nuclear wastes, and such noxious materials as nerve gas and mustard gas left over from war;
- exploring the ocean depths with complex scientific equipment, gaining knowledge that can be used for peaceful or military, or purely scientific or commercial purposes.

Even that traditional use of the sea, fishing, has been utterly transformed. Once a



HUGO GROTIUS.

London, Published as the Act directs, July 12<sup>th</sup> 1806, by J. Wilkes.

FROM THE COLLECTION OF MR. GERALD BODNER

relatively primitive activity, it is now practised on a massive scale by fleets fishing far from home, using sophisticated methods, rather like vacuum cleaning.

In the briefest space of time, therefore, we have reached the point where we can overuse or misuse the sea. As ancient and vast as it is, the sea cannot indefinitely be abusively exploited. Like everything else in our world, it has its limits. Human technology can now fish whole species to virtual extinction. Man-made pollution from all sources damages fish and bird life, befouls coastlines used for recreation or habitation, and could even upset oceanographic systems on which we depend in large measure for our climate and oxygen supply.

The world's nations now recognize these facts. They know the law must be changed to prevent abuses and provide for responsible management. They also, however, wish to protect their respective rights as they see them.

Many states with substantial coastlines, such as Canada, wish to retain control over the oil and gas deposits off their shores and to extend their control over fishing, over ship-generated hazards to their environment, and over marine scientific research, beyond the present limits of their jurisdiction for such purposes.

By contrast the major maritime powers, with their global strategic, fishing, trading and mineral resource interests, feel a strong need to limit or modify some coastal state claims, so as to maintain their own freedom of navigation and related economic and military concerns. Both sides, in a sense, consider their sovereignty or freedom of action to be threatened.

These conflicting positions are important, even dangerous, but they must not be exaggerated. In Canada's view at least, the states of the world share the goal of resolving these conflicts, and this has been the goal pursued at Geneva in 1958 and 1960, and at the third United Nations Law of the Sea Conference, begun in New York in 1973

# continental margin

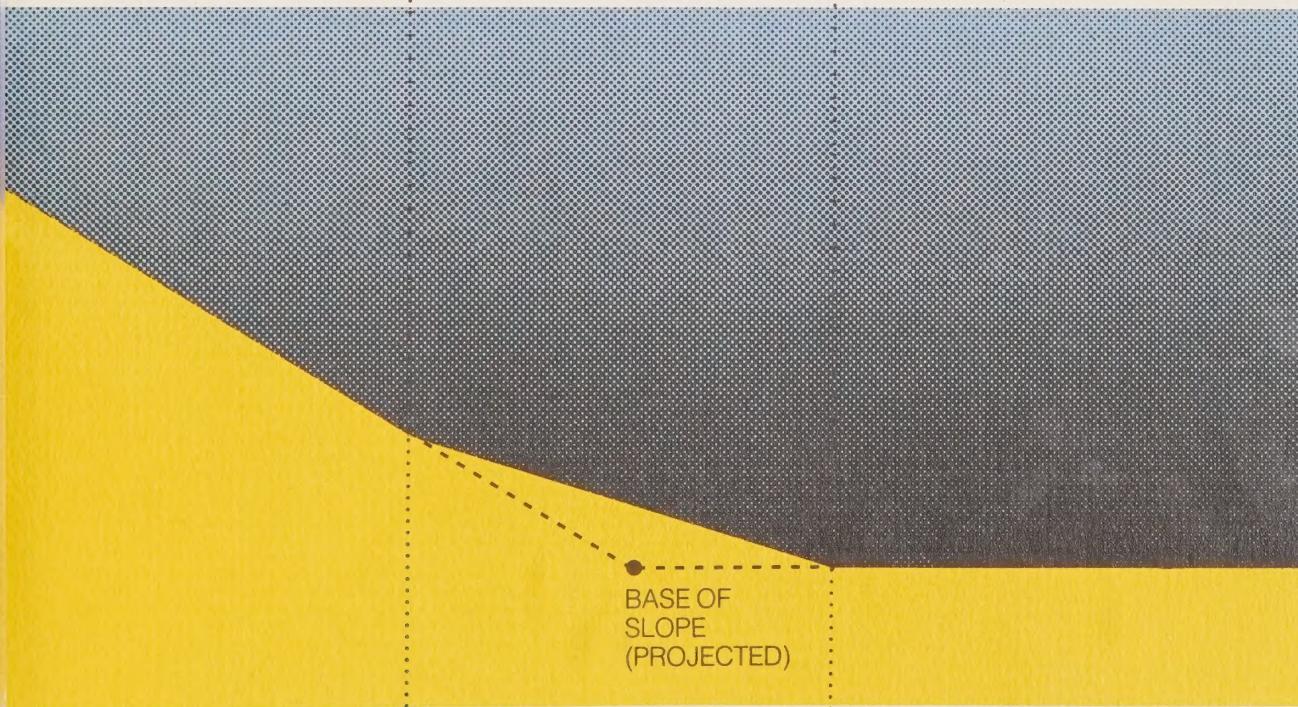
PHYSICAL CONTINENTAL SHELF  
*gently-dipping part of the seabed extending out from the shoreline to the transitional zone where there occurs a significant increase in dip marking the beginning of the continental slope.*



**CONTINENTAL SLOPE**  
area of the seabed extending from the outer edge of the continental shelf to the abyssal ocean floor or to the continental rise where that feature exists. The inclination of the slope varies widely from less than three degrees to over forty-five degrees.

**CONTINENTAL RISE**  
apron of sedimentary rocks that slopes gently oceanward from the base of the continental slope, usually in 2000 to 5000 meters of water. Where deep sea trenches are present along the margin of the continent, the continental rise does not occur.

**ABYSSAL PLAIN**  
*flat-lying portion of the deep seabed situated beyond the continental margin.*



and continued in Caracas, Venezuela, in 1974. It is also a goal of the future, for, like peace, the conservation of global resources must be re-examined by each succeeding generation.

#### *Canada's stake in the Law of the Sea*

To realize how vitally interested Canada is in Law of the Sea issues, it is only necessary to look at a map of the country: Canada has the longest total coastline of any nation in the world.

Canada also has the second largest continental shelf, that vast submerged area that is the natural prolongation of Canada's land mass into and under the sea, an area already rich in fish resources of many kinds, and potentially rich in oil and gas deposits.

Canada is one of the major fishing nations of the world and one of the major mineral producing states.

Canada is one of the major trading nations, dependent on the shipping of goods to and from its ports.

And Canada possesses large vulnerable coastal areas on the Atlantic and Pacific, and in the Arctic, which significantly affect the ecology of the northern hemisphere.

Because of these basic interests, Canada has been in the forefront of attempts to modernize the laws governing use of the oceans. Through its own domestic legislation, and through various international treaties and conventions, Canada has sought to advance its national interests with policies of restraint and reason on such key issues as marine pollution and conservation of fisheries. Canada was instrumental in bringing about agreement on the need for and the scope of the third Law of the Sea Conference. Canada has played a leading role in the preparations for that Conference.

At Caracas, Canada will continue to stress a comprehensive approach to the management of the sea's uses and resources. As a coastal state, Canada shares many of the concerns of the developing coastal nations

in Latin America, Africa and Asia. As a trading partner of all and ally of some, Canada also understands the navigational and related interests of the larger maritime powers. As a responsible member of the world community, Canada also understands that the challenge is to reach an accommodation respecting both the varying needs of individual states and those of humanity as a whole.

#### *What is needed?*

Reconciling the many national needs and interests will not be an easy task. Each issue raises opposing views and affects all the other issues. An increase in national rights over pollution prevention and control, for example, increases the likelihood of interfering with navigation; the upholding of unfettered and unregulated rights of transit of the oceans, on the other hand, increases the threat from pollution. Hence the Canadian position that all these issues are so inter-related that they must be dealt with as a package, rather than one by one in isolation.

At the heart of the problem lies the need to distinguish clearly between the areas under national control and the international area beyond, both in terms of the limits of these areas and the rights and duties of states within them. In the view of most coastal states, national control should comprise the territorial sea over which a state exercises total sovereignty (subject to the right of innocent passage for foreign vessels), plus an "economic zone" (or "patrimonial sea" as it is referred to by the Latin Americans) over which the coastal state would exercise specific rights over marine resources and the environment, while at the same time having the duty to preserve and protect international community interests within the zone, especially with regard to navigation and overflight and the prevention of pollution.

Clearly the negotiators at the Law of the Sea Conference, representing 148 nations, have their work cut out for them, even on the issues which at first glance might seem the easiest to resolve.

# fisheries

2

With an expanding world population and an ever increasing demand for protein, the living resources of the sea become daily more important. To satisfy the demand, modern technology has devised highly efficient means of harvesting the oceans. Long-range "factory" fleets go to sea for months at a time, equipped with self-contained processing and freezing plants and sophisticated fish detecting equipment, hunting hundreds and even thousands of miles from their home waters.

But this expanding exploitation cannot go on. In the foreseeable future, all major fish stocks useful to man will be exploited to the maximum the stocks can bear or beyond. With unrestricted competition for these scarce resources, particularly by the gigantic distant water fleets that can move from stock to stock with devastating effects, overfishing and consequent reductions in yields would inevitably follow. Already, in some of the world's most valuable fisheries such as herring, the declines have set in. For some species of whales, overfishing has caused such a serious depletion that fifty years will be required to assure their restoration. In this light, there is an urgent need for establishment of management regimes to tailor fishing pressure to the capacity of the resources to regenerate themselves.

For the coastal fisherman, dependent on the stocks that in turn depend upon his home waters, overfishing by others can spell the end of his livelihood. This is where fisheries management comes in. The whole point of management is (ideally) to harvest the greatest yield that the complex of fish stocks in an area can replace annually. Only by applying management controls, such as quotas and seasonal

limits (for example, during spawning), can the maximum yield be available each year to coastal fishermen and long-range ships alike.

Perhaps the greatest difficulty in preventing overfishing arises from the freedom of the high seas concept. If fishing vessels can go on increasing in number, sail wherever they please, and harvest any stock to the limits of their capacity, two dangerous problems arise: conservation becomes impossible, and coastal states with foreign fleets on their doorsteps are deprived of a resource on which they depend.

Canada is affected by both these problems. With fishing communities on both its coasts, Canada must protect its fishermen's livelihood as well as the resources on which they depend. Farther from home, Canada is also concerned that proper conservation measures be applied throughout the world, or there will not be enough fish left for anyone, anywhere. This is particularly true for the tuna fisheries in the offshore waters of both the Atlantic and Pacific where some Canadian fishermen are actively engaged.

## *Who should fish what?*

Canada's approach to these problems is good management of fisheries, as part of the broader need for management of the whole marine environment. The application of this approach has been described as "functional" as it would bring each species under the appropriate management regime according to the species' life cycle, distribution, migratory behaviour, and conservation requirements.

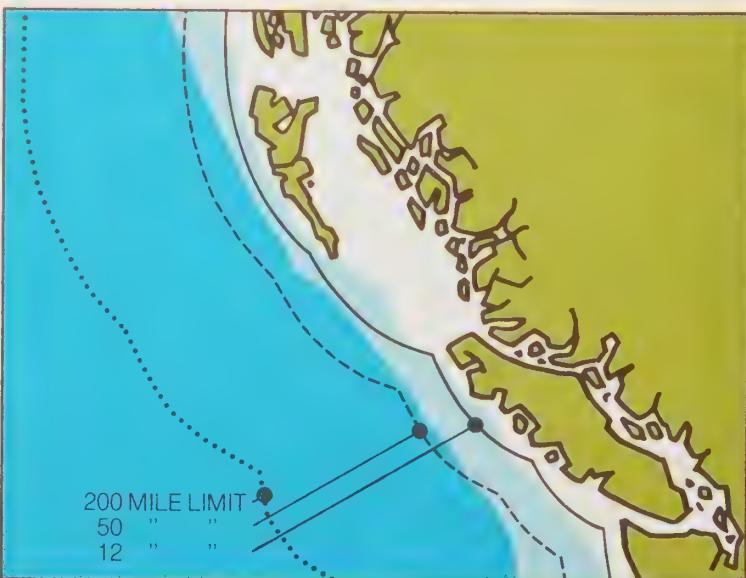
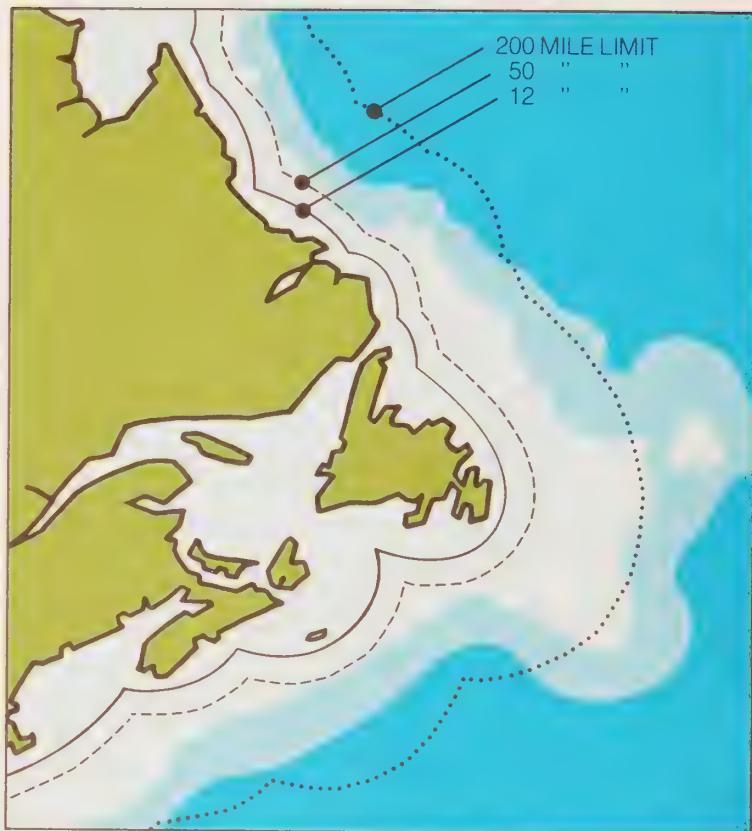
To illustrate how this approach would work, Canada has grouped marine living resources into four categories, each subject to a different type of management system (see illustrated fold out on page 11).

Thus, in varying degrees, the coastal state would be delegated the authority necessary to manage all the resources referred to above—a type of custodianship—together with specific harvesting rights. In the Canadian view, this is the most functional

and effective method of managing the world's fisheries. The coastal state, with its physical proximity to the resources and its preeminent interest in their well-being, is likely to do the best job of managing them. Such management, however, must be subject to the obligation to ensure optimum utilization for humanity of the world's scarce food resources. In this light, the coastal state's management authority would be based on internationally agreed principles which would recognize the coastal state's legitimate requirements, the desirability of making the fullest use of the resources as a whole, and the need to allow foreign states access to fish stocks surplus to the coastal state's requirements. Regional fisheries commissions could continue to play an active role in the implementation of such regimes.

The 200-mile economic zone advocated by many coastal states wherein the coastal states would have exclusive sovereign rights in both the management and harvesting of all fisheries would in part meet Canada's needs. But a single all-embracing limit such as this does overlook the fact that the continental margins of a few coastal states, like Canada's, extend beyond 200 miles; in Canada's case, more than 400 miles and 600 miles in places off the Atlantic Coast. Therefore, since many species range over the entire continental margin and must be managed consistently and as a whole, Canada is seeking to ensure that these biological facts and the special needs of the coastal state are given adequate recognition even beyond 200 miles where necessary.

Current trends towards an enlarged coastal state jurisdiction over fisheries favour Canada's position. Opposition to these trends remains important, however. Many long-distance fishing nations continue to insist on their long-standing freedom from anything but international controls. These, however, are often non-existent, inadequate, or too late in their application, and in any case can be vetoed by any state in respect of its own fleet.

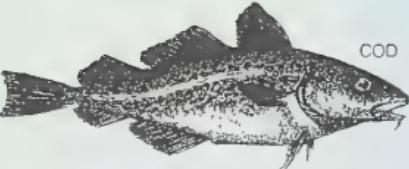




BLUE CRAB



OYSTER



COD



HALIBUT



ATLANTIC SALMON



SOCKEYE SALMON



BLUE WHALE

## coastal species

The coastal species (the most numerous and important) such as herring, halibut and cod, which are free-swimming but generally found over the nutrient-rich continental margin and areas of upwelling associated with the coast, would be managed by the coastal state which would have preferential rights in the total allowable catch to the limits of its fishing capacity. Other nations would be free to fish the surplus, subject to regulation by the coastal state.

## sedentary species

Sedentary species such as crabs and oysters would be harvested exclusively by the coastal state (a practice already confirmed in the 1958 Continental Shelf Convention).

## anadromous species

Anadromous species (river-spawning) such as salmon would be managed throughout their migratory range by the state in whose rivers they originate. Only coastal states would have the right to harvest these stocks and subject to arrangements between neighbouring states whose anadromous stocks may intermingle, only in areas under their own jurisdiction. These principles imply a ban on high seas fishing for anadromous species, which otherwise would be harvested before maturity, resulting in economic loss. They also reflect the coastal state's heavy financial burden in the conservation of the spawning rivers of these species, sometimes involving direct investment or indirect losses by the sacrifice of hydro-electric power or other benefits.

## wide-ranging species

Wide-ranging species such as whales, tuna and swordfish, by their very nature, need International regulation and would be the subject of international agreements among the states involved in their harvest, taking into account the periods in which they inhabit waters under the jurisdiction of coastal states.

## atlantic coast

The Atlantic coastline of Canada, south of the Arctic circle, including Hudson Bay, the Gulf of St. Lawrence, the Bay of Fundy, 46 major islands and 29,227 smaller islands under 50 square miles in area, totals 66,606 statute miles in length.

The area of the geological continental shelf of that region is 869,000 square statute miles, that of the geological slope 178,000 square statute miles, and that of the rise 350,000 square statute miles. Thus, the area of the whole of the continental margin is approximately 1,400,000 square statute miles.

## key



## pacific coast

The Pacific coastline of Canada, including Dixon Entrance, Hecate Strait, Queen Charlotte Sound, the Straits of Georgia and Juan de Fuca, 36 major islands and 5,498 smaller islands under 50 square miles in area, totals 50,983 statute miles.

The area of the geological continental shelf of that region is 37,000 square statute miles, that of the geological slope 13,000 square statute miles, and that of the rise 15,000 square statute miles. Thus, the area of the whole of the continental margin is approximately 65,000 square statute miles.



# minerals

3

**I**t is estimated that in another decade, more than a third of the world's production of oil and gas will come from offshore deposits, mainly on the continental shelf. Rough estimates are that 2.2 trillion barrels of offshore oil resources exist—one-hundred and fifty times more than the present world production per year.

Although oil and gas resources are believed to be confined to the areas within national jurisdiction, the international area is thought to be rich in ferro-manganese nodules, the potato-shaped mineral deposits covering vast areas of the deep seabed in the central Atlantic and Pacific Oceans. The nodules contain four elements of major significance for the world economy: nickel, copper, cobalt and manganese. In the Pacific alone, the nodules amount to about 1.5 trillion tons and are accumulating at the rate of six million tons per year.

The developing and landlocked nations in particular are concerned not to be deprived of their share of the benefits from these resources. A 1970 declaration of the United Nations, which Canada supported, confirmed that there is an area of the ocean floor beyond the limits of national jurisdiction which is "the common heritage of mankind" and subject to international regulation. Thus, once again, the crucial question is "what are the limits of national jurisdiction?"—in this case, over seabed resources.

#### *Who should mine what and where?*

Canada's position on this issue is based mainly on the only relevant international agreement, the 1958 Continental Shelf Convention, now in force and ratified by more than 40 states including Canada. This Convention which had its origin in the 1945 Truman Proclamation, made unilaterally by the United States, recognizes that coastal states enjoy exclusive sovereign rights over their continental shelves for

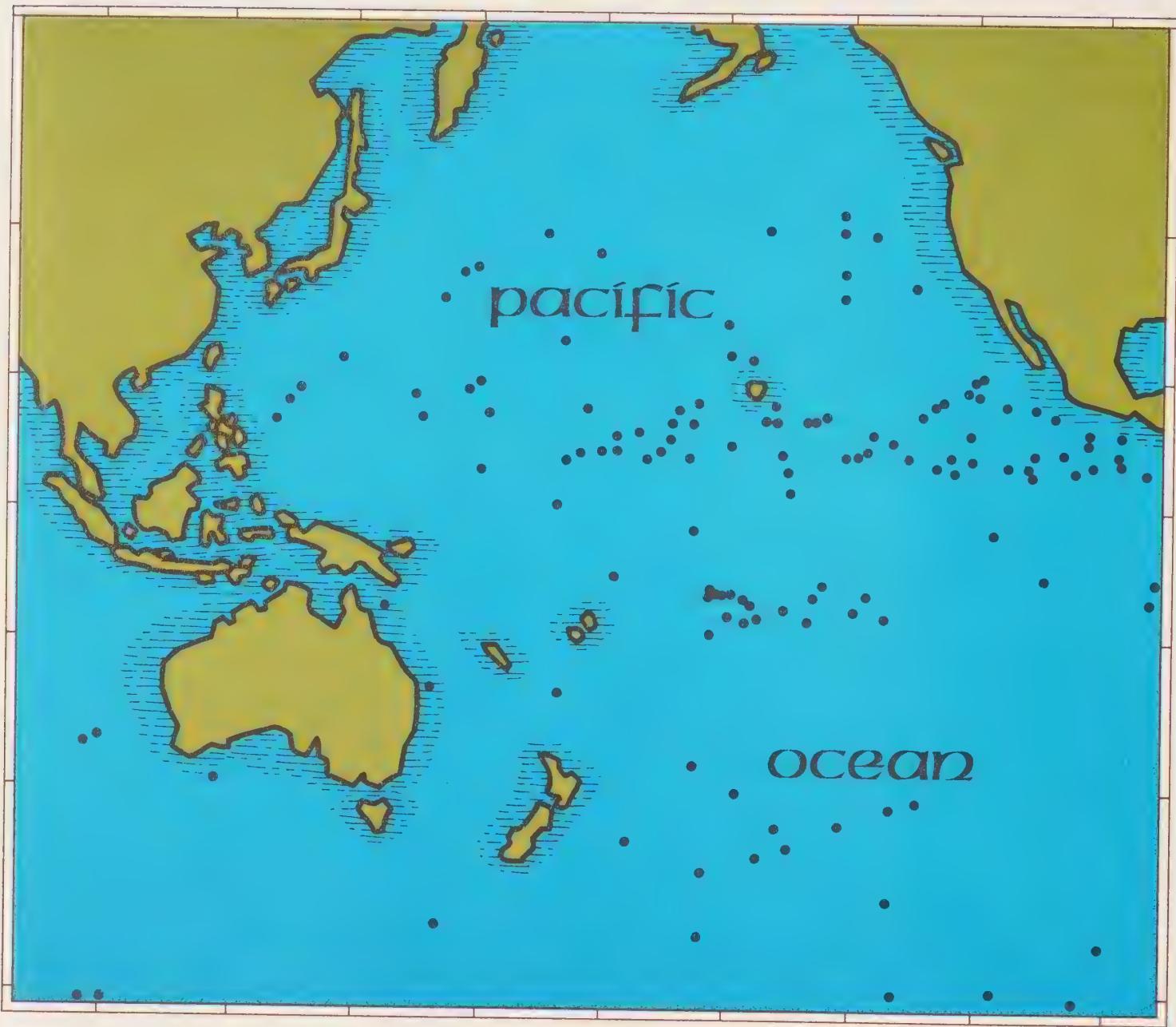
the purpose of exploring them and exploiting their natural resources (which include not only mineral resources but also the sedentary fisheries referred to earlier). The Canadian position also rests on the 1969 decision of the International Court of Justice in the North Sea Continental Shelf cases (which defined the continental shelf as the submerged natural prolongation of the continental land territory) and on state practice.

One of the problems is that the 1958 Convention defined the limits of the continental shelf in a very elastic way: the outer limit can be either a depth of 200 metres or, beyond that, the depth to which the seabed resources can be exploited (known as the "exploitability test"). At the time when this test was established, the technology did not exist to mine the seabed to a depth greater than 200 metres. Now it does exist; and since the interests of the international community would not be served if any nation could march right out to the middle of the ocean and stake unilateral claims there, the exploitability test must be replaced with a more precise limit for national rights.

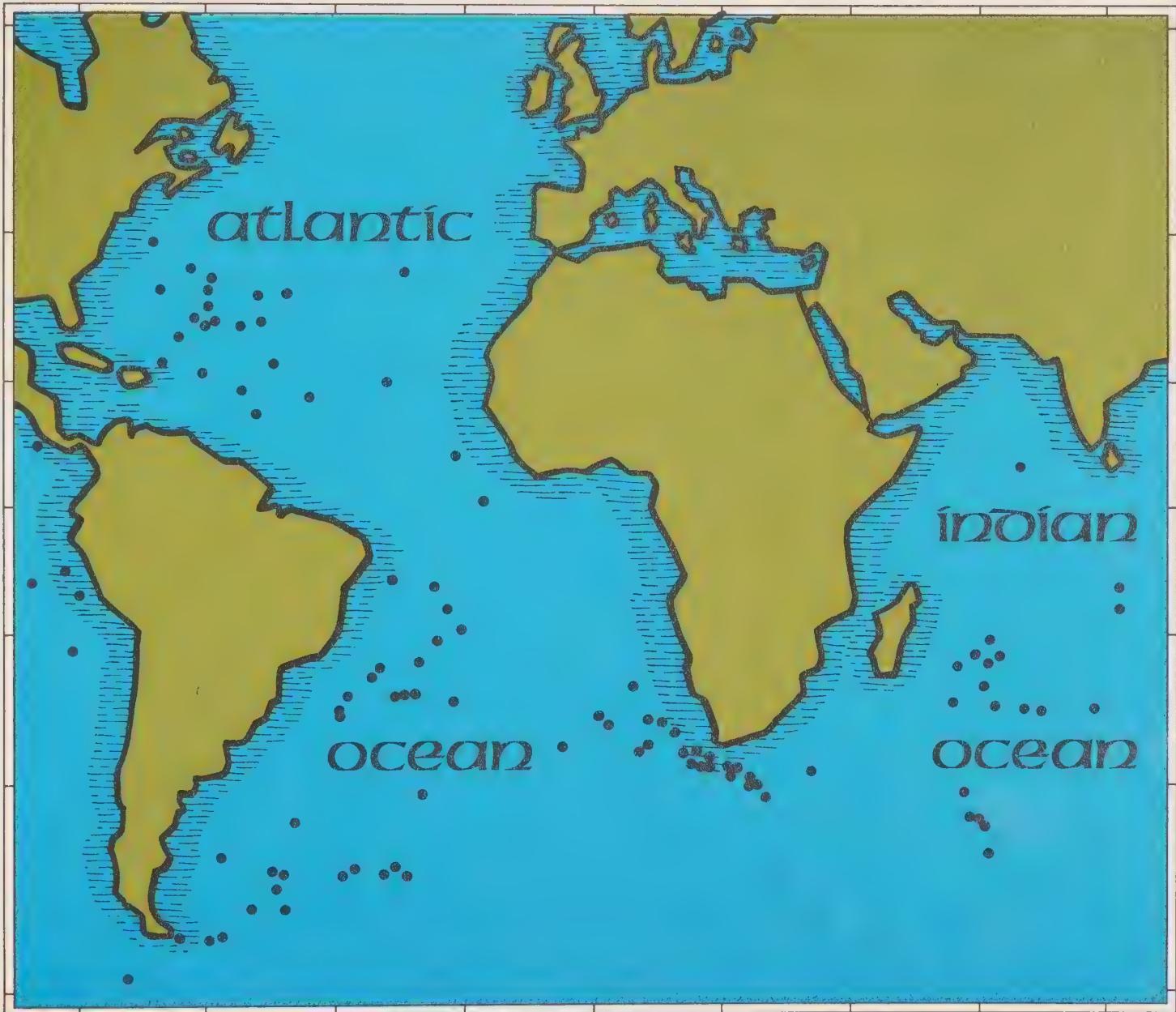
Canada therefore advocates—and claims to have already acquired for itself on the basis of existing law—the exclusive right of the coastal state to the seabed resources of its continental margin. Beyond this limit would lie the international seabed area, to be administered by an International Seabed Authority on behalf of all nations.

#### *The international seabed area*

Opposition to the Canadian stance on the limits of national jurisdiction comes especially from a group of landlocked countries and shelf-locked countries (those with relatively narrow shelves circumscribed by their neighbours). These states wish to maximize for themselves the benefits that would come from international control over a larger area of the seabed. For this reason, they have proposed a 40-mile limit for national jurisdiction. This group may be large enough to form a potential blocking third when the matter comes to a vote



WORLD DISTRIBUTION OF manganese nod



ules

Although manganese nodules are generally found over the entire ocean floor, their concentration and economic value vary from place to place. The most attractive deposits, from the point of view of the ocean mining interests, are found in great water depths (between 10,000 and 20,000 feet) where sedimentation is negligible. The central Pacific, southeast of Hawaii, is currently attracting most attention.



Manganese nodules on the floor of the South Pacific Ocean have a high content of nickel and copper as well as significant amounts of cobalt and other metals. Photograph courtesy of Lamont-Doherty Geological Observatory.

(assuming that decisions at the Conference will be taken by a two-thirds majority).

At the same time, some proponents of a wide economic zone concept would nevertheless limit a coastal state's continental shelf rights to 200 miles. In their view, the retention of existing coastal states' rights beyond that limit would deprive the proposed International Seabed Authority of too great a part of the accessible resources, thus leaving fewer benefits for the "common heritage of mankind" to be distributed among the international community and the developing countries in particular.

It should be noted that a 200-mile economic zone would give the great majority of coastal states the whole of their continental margin. Only Canada and a handful of other wide-shelf states would be asked to sacrifice areas of their continental margin.

Canada's continental margin is only about 40 miles wide on its west coast but, as mentioned earlier, well over 400 miles in places off its east coast.

Simultaneously with the definition of an outer limit of national rights over offshore minerals, the powers of an International Seabed Authority must be defined.

The developing nations want all mineral resource exploration and exploitation activities in the international area, including scientific research, to be carried out by the International Seabed Authority and not by individual states. However, many now recognize that the high cost of seabed exploration and exploitation would be beyond the means of the Authority alone, at least at first. Accordingly, some are concluding that joint ventures and other forms of collaboration between the Authority and individual contracting states may be necessary. Several developed countries, on the other hand, want a simple licensing scheme, allowing them to go ahead on their own with the Authority's role largely confined to issuing and registering the necessary licenses.

Canada advocates an accommodation of national interests on this delicate but high-

ly important issue. The role of the International Authority must be defined in a way that helps narrow the gap between the "have" and "have not" countries, rather than widening it. In the Canadian view there should be a mix of licensing and subcontracting by the Authority, as well as direct exploitation by the Authority itself when it acquires the means and know-how.

This approach attempts to satisfy both the long-term needs of the developing countries and the short-term demands of technologically advanced, resource-hungry nations.

Some developed countries will soon have the technological capability to extract and process the manganese nodules for commercial purposes. Indeed, a number of U.S. and other companies are said to be ready to move to the exploitation stage within two or three years. This possibility arouses strong concern on the part of developing nations. They argue that several technologically advanced countries have ignored the 1969 United Nations resolution calling for a "moratorium" on exploitation of the international seabed, by undertaking research and experimental activities in the area with a view to ultimate exploitation. Canada, along with most developed countries, was unable to vote in favour of the moratorium resolution, believing that it would unduly restrict technological progress and cause an unacceptable delay in making these resources available to all.

Of special concern to Canada is the high nickel content of the manganese nodules. Canada is the world's largest producer and exporter of nickel, and also exports copper and cobalt. It cannot ignore the impact that mining of the nodules could have on its economy. Canada is not alone in this position; for example Chile, with its enormous copper output, has a comparable interest. Therefore, Canada is pressing for an orderly regime for the development of the international seabed area, under which the law will keep up with technology, and the abyssal seabed resources will benefit all mankind.

# navigation

4

**t**he new powers being proposed or already claimed by coastal states, including sovereignty over a wider territorial sea and wider jurisdiction over pollution, could give rise to conflicts with the navigation interests of major maritime powers. On the resolution of these conflicts, more than anything else, may hinge the success of the Law of the Sea Conference.

More than 50 states already claim a 12-mile limit for the territorial sea. The coastal state exercises full sovereignty over this area, but must permit foreign vessels innocent passage through it. Submarines must navigate on the surface in another nation's territorial sea. Passage is "innocent", according to the 1958 Convention on the Territorial Sea, if it is not prejudicial to the peace, good order and security of the coastal state. If the coastal state decides that passage is prejudicial on these grounds, it may take action to stop it.

But can the passage of a polluting ship be innocent? Can a nation's people stand idly by while a passing vessel contaminates the shores on which they live? Canada maintains that "environmental integrity" is as valid a concept as "territorial integrity", and that every state has the right to protect itself by legitimate means against acts of "environmental aggression". Canada

asserts that a coastal state can suspend the passage of a foreign vessel through its territorial sea where a serious threat of pollution is involved. Canada will seek to have this right explicitly confirmed in international law. On this point Canada is opposed by major maritime powers, who fear that such an interpretation of innocent passage would entitle coastal states to interfere unduly with the movements of their naval and merchant vessels.

## *Straits and archipelagos*

A similar conflict centers on passage through straits used for international navigation. With a 12-mile territorial sea, certain straits that were previously in international waters are completely overlapped by territorial sea and so come under the jurisdiction of one or more coastal nations. Some of these straits are among the most important in the world from a military and commercial point of view: Gibraltar, which connects the Atlantic with the Mediterranean; Hormuz, the entrance from the Arabian Sea to the Persian Gulf; Malacca, between Malaysia and Indonesia; Bab El Mandeb, linking the Red Sea to the Indian Ocean; and so on.

The major maritime powers are insisting on their freedom to pass through these straits. They want to repudiate the present doctrine of innocent passage through straits used for international navigation, now that more such straits are affected. In its place they wish to substitute a right of "free or unimpeded transit", under which the states bordering the straits could in no circumstances prevent traffic going through them. The strait states adamantly oppose this view. They consider some measure of control essential to their security and the protection of their environment.

Canada is a major trading nation dependent on seaborne commerce, although it does not have a large merchant marine of its own. Its security also depends in part on the free movement of vessels, whether its own or those of its allies. However, Canada also places great importance on protection of the marine environment. Thus

Canada is in favour of a reasonable degree of traffic regulation in straits used for international navigation, sufficient for the purposes of security and environmental protection but not so extensive or arbitrary as to interfere unduly with the movement of vessels through those few straits that control access to the seas and oceans and major shipping routes of the world.

In the particular case of the Northwest Passage through the Canadian Arctic, there could be no question of applying any international regime devised for free transit through straits. Canada claims the Northwest Passage as being entirely under Canadian jurisdiction. As it has never been used for international navigation in any real sense, the Northwest Passage cannot be considered an international strait. Accordingly, it could at most be subject to the traditional regime of innocent passage, under Canadian regulation.

Closely related to the straits issue is the matter of oceanic archipelago states. These are states consisting of groups of islands, such as Indonesia, the Philippines and Fiji (as opposed to states, such as Norway and Canada, whose main territory is continental, but also comprises off-lying groups of islands). The oceanic archipelago states wish to define their territorial waters by drawing straight baselines joining the outermost points of the outermost islands and measuring the territorial sea outward from these lines. Within these inner and outer boundaries the archipelago state would have complete sovereignty, subject to the right of innocent passage by foreign vessels along designated sea lanes.

Canada generally looks favourably on this proposal, since it appreciates the legitimate concerns of the archipelago states for their security and the protection of their environment. Again, however, Canada considers that these rights and powers of the archipelago states must be balanced by responsibilities and obligations towards the world community, taking into account the vital need for seaborne commerce and communication.

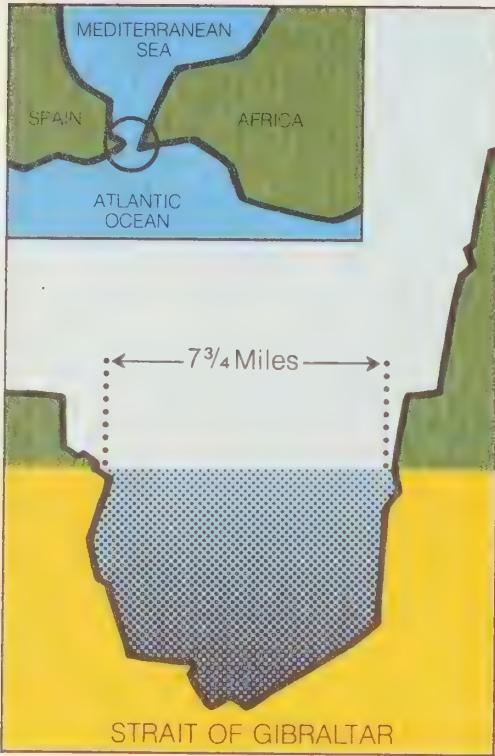


MAP OF CANADA SHOWING THE  
CONTINENTAL SHELF, SLOPE, MARGIN AND A  
HYPOTHETICAL 200 MILE LINE

— Canada/Denmark Continental Shelf Agreement

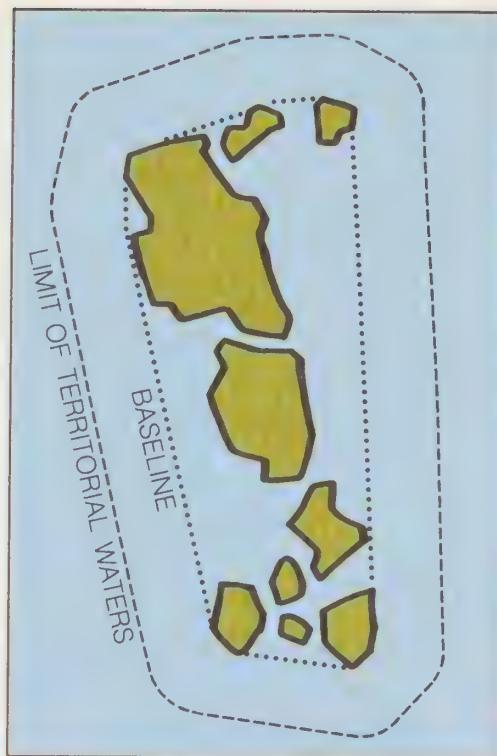
..... Fisheries closing lines





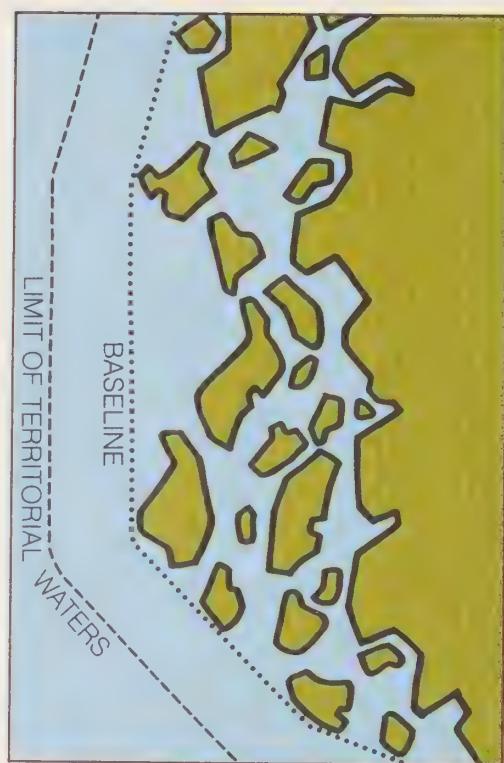
## international straits

These are straits which have traditionally been used as means of communication between one part of the high seas and another part or the territorial sea of another state, and which have a width of 24 miles or less. A prime example is the Strait of Gibraltar. Since the waters of such straits are territorial, the rights of the coastal states bordering them must be respected but at the same time international navigation must not be unduly impeded. Physical conditions vary from strait to strait, and what constitutes innocent passage in one strait may not be acceptable in another owing to special circumstances which seriously increase the risk of pollution, collision or other disaster. Thus, there is a need for a better definition of the respective rights and duties of both strait states and user states.



## archipelagoes: oceanic

Oceanic archipelagoes are groups of islands which form a geographic entity or unit unrelated to any "mainland". Indonesia and the Philippines are the best examples. These states claim the right to join the outermost points of the outermost islands with straight baselines, thus enclosing the waters of the archipelago. Others have proposed that a limit be imposed on the length of baselines and on the land-water ratio, so as to avoid widely scattered groups of islands claiming vast expanses of the ocean. As many such archipelagoes lie across important shipping lanes, these concepts may affect the transit of ships.



## coastal

Coastal archipelagoes are those which lie in close proximity to the mainland. In most cases, such groups of islands belong to the state to which they are adjacent. The classic example is that of the fringe of islands off the coast of Norway. In 1951, the International Court of Justice ruled that these islands could be joined by straight baselines from which the territorial sea of Norway would be measured, since the waters between these islands and the mainland were so closely linked to the land mass that they could readily be subjected to the same legal regime. The straight baseline system has since been widely applied throughout the world by states with similar geographic configuration.

# pollution

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The break-up of the oil tanker *Torrey Canyon* off Britain's south coast, and the foundering of the *Arrow* off Nova Scotia, illustrate in part what is wrong with the world's practices regarding marine pollution from ships. In the absence of adequate or adequately enforced international environmental law, unsafe or ill-equipped ships transport oil or other noxious substances across the oceans—and when a coastal disaster occurs, the coastal state is left to suffer the results and clean up the mess.

In the case of the *Arrow* spill in 1970, 190 miles of shoreline around Chedabucto Bay were contaminated with oil. Thousands of seabirds and countless fish died as a result. Canada had to spend more than \$3 million to clear up the mess and even then most of the damaged shoreline was virtually uncleanable.

Immediate action was needed, and since action on the international plane was slow in coming, Canada had no choice but to pass its own legislation to protect its oceans and coastlines. In 1970 Canada passed the Arctic Waters Pollution Prevention Act (shortly after the experimental Arctic voyage of the jumbo oil tanker *Manhattan*), giving itself jurisdiction for the prevention and control of pollution within 100 miles of its Arctic coasts. Somewhat similar regulations covering other special areas off Canada's east and west coasts have also been passed under the Canada Shipping Act. With its long coastline, hazardous weather and delicate northern ecology, this country is especially vulnerable to the effects of pollution. Thus, Canada was faced with an imperative need to take these exceptional measures of self-protection.

But Canada has also been active in the international arena; what international

controls there are, Canada has helped to create.

The Intergovernmental Maritime Consultative Organization (IMCO) administers several international conventions formulated during the 1950's and 1960's to regulate oil pollution from shipping. But these conventions, useful as they are, deal only with particular types of pollution and do not include adequate mechanisms to enforce controls or compensate countries that become victims of marine pollution. A more comprehensive approach to the problem is needed.

The basis for such a comprehensive approach was established by the Declaration on the Human Environment which emerged from the United Nations Stockholm Conference in 1972. It contained fundamental principles for the framing of international environmental law, including (1) the duty of states to prevent marine pollution from all sources; (2) the responsibility of states to ensure that activities under their jurisdiction do not damage the environment of other states; and (3) the necessity for states to develop further the international law regarding liability and compensation in cases of environmental damage. The Stockholm Conference also recognized the special interests of coastal states in the management of coastal resources, and the need for management concepts to be applied to both marine resources and the marine environment. Thus the Conference gave adequate recognition to policies that Canada has long been advocating and which are incorporated in draft proposals which Canada has put before the Law of the Sea Conference. It is this Conference which has the task of translating the Stockholm Convention principles into international law.

*The who, how and where of preventing pollution.*

Whatever standards may be adopted by the Law of the Sea Conference will concentrate chiefly on pollution from shipping and mineral exploitation of the seabed. Land-based sources of marine pollution, which account for about 80% of the total, are a matter for individual action by each country and for international cooperation in some other form, leading to the adoption of adequate international standards.

With regard to pollution from ships, Canada subscribes to the idea that there must be stringent, internationally agreed standards for the preservation and protection of the marine environment effectively enforced by both flag and coastal states. But Canada also believes that coastal states should be empowered to adopt and enforce their own anti-pollution standards over and above international rules, when necessary—that is where exceptional conditions prevail such as in areas characterized by vulnerable ecology, unusual navigational hazards or especially heavy concentration of shipping, and where internationally agreed rules do not provide adequately or at all for these conditions. This Canadian approach would apply not only in territorial waters, but also within areas of coastal jurisdiction beyond, where the special conditions mentioned above also prevail.

A number of states, mainly the important shipping nations, are opposed to this view. They fear that such jurisdiction would allow a coastal state to interfere indiscriminately with navigation. Accordingly, these states favour a system of exclusively international rules and standards to be enforced mainly by the state of ship's registry—not only on the high seas, but, at least according to some countries, in the territorial waters of coastal states as well.

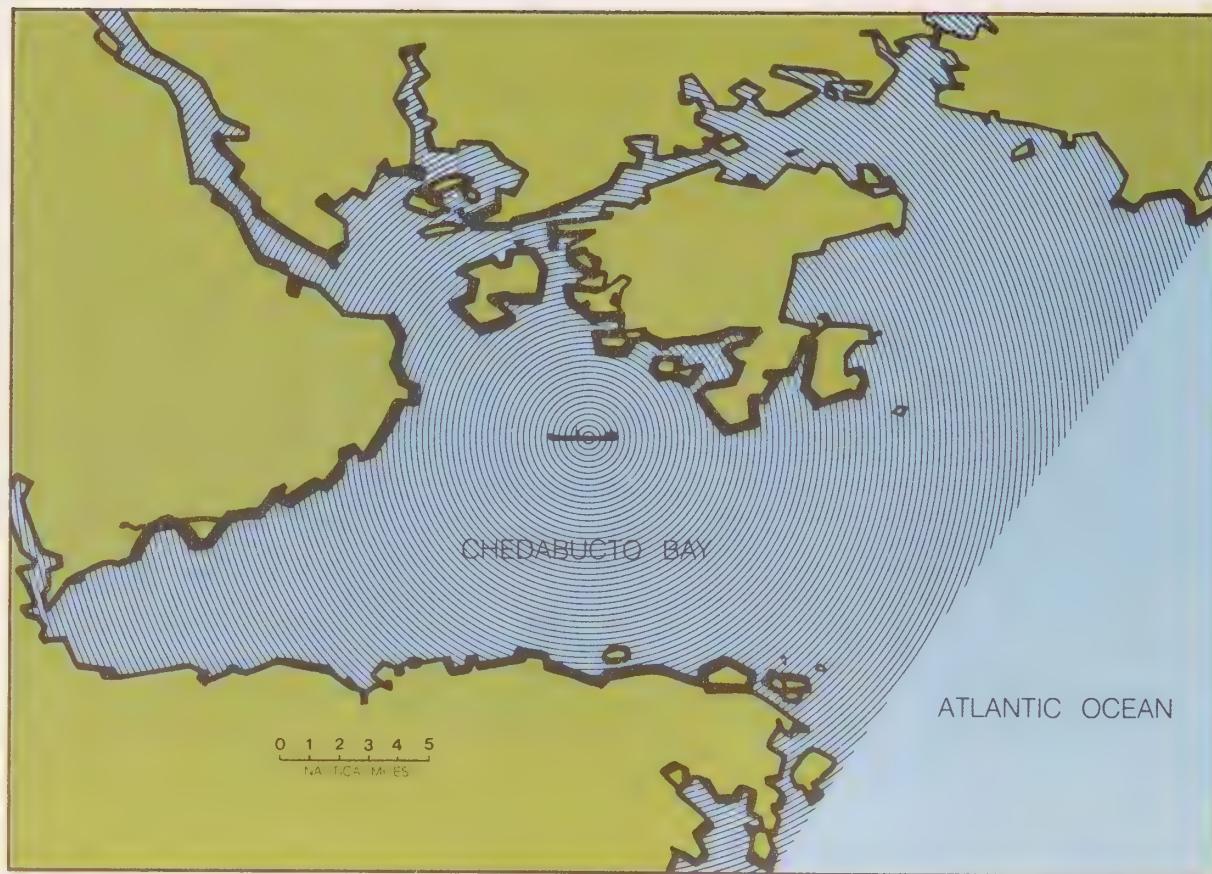
Closer to the Canadian position are many of the developing coastal states, which advocate national jurisdiction over pollution within the 200-mile economic zone.

Canada believes that the greatest practicable degree of uniformity or harmonization

of anti-pollution standards is an essential part of the good order and good management needed to ensure preservation of the marine environment throughout the world. To the extent that exceptionally vulnerable localities and regions may be given the more stringent protection they need under special international agreements, Canada considers this approach to be the most desirable. But Canada considers that no state can be asked to surrender its ultimate right of self-protection to a system of exclusively international anti-pollution rules and standards. This would presuppose an international law-making body which would have the expertise and objectivity to make the right decisions for all areas, and the power to impose them on all states, whether willing or not. No such body exists at this time, and it seems most unlikely that one can be created at this stage of international political development.

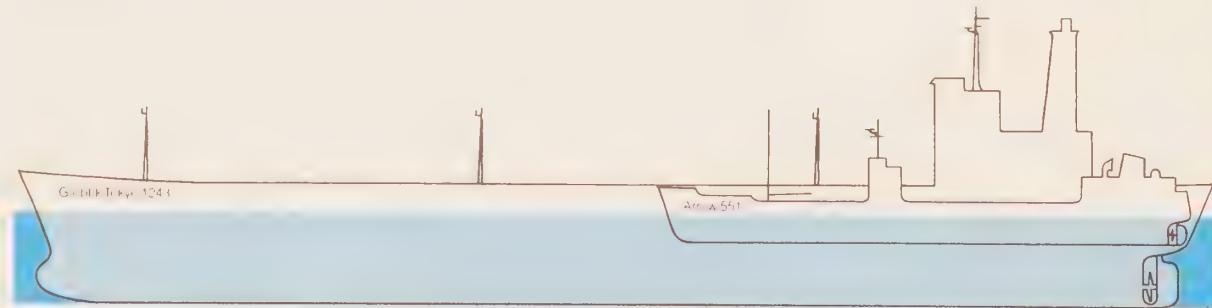
Similarly the Canadian approach to the exploitation of continental shelf resources calls on the states of the world to agree to at least a framework of minimum rules and standards for the prevention of pollution from this source, leaving them free and indeed encouraging them to adopt stricter standards for themselves. Little controversy arises on this point, as the sovereign rights of the coastal state over the exploitation of its continental shelf are already recognized. The only difficulty may perhaps lie in persuading some states to accept even the minimum internationally agreed rules and standards. As for the seabed beyond national jurisdiction, the internationally agreed rules and standards developed for the continental shelf could serve as the model for those to be imposed in this outer area by the International Seabed Authority.

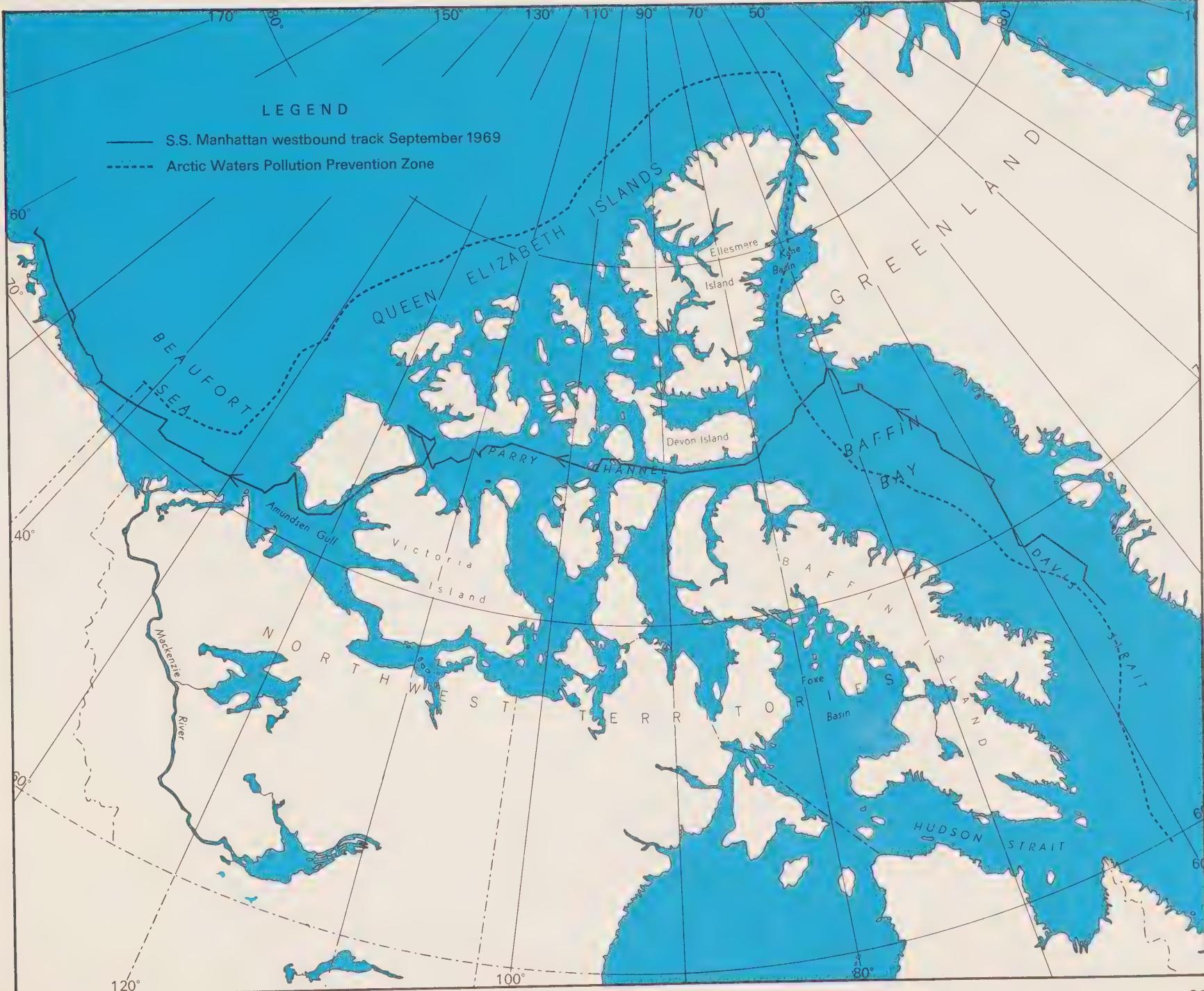
The whole of this Canadian approach to the prevention of marine pollution would temper the old exclusive rights of both coastal and flag states. It would ensure recognition of the fact that clean seas are at least as important as free seas. And, under appropriate safeguards, it should harm the interests of no state and protect the interests of all.



*On February 4, 1970, the Arrow, a tanker operating under a flag of convenience, ran aground on Cerberus Rock in Chedabucto Bay, N.S. More than 190 miles of shoreline were affected from the resulting oil spill. The above illustration shows the extent of pollution. Shoreline contamination is indicated by heavy lines.*

*What would have been the extent of the damage if the accident had involved the Globtik Tokyo (483,664 tons) rather than the Arrow (18,151 tons)?*







# marine scientific research

**R**esearch is widely pursued in the world's oceans for a variety of purposes, scientific, economic and strategic. The aim may be "pure" research into the formation of the ocean floor or the movements of ocean currents or the behaviour of marine species, such as research made famous by Jacques-Yves Cousteau and his colleagues, contributing to man's knowledge of the ocean depths and even aiding fisheries management or pollution control. Or research may be carried on by oil and mining companies or by national governments for a variety of other purposes. Obviously, however, even "pure" research can be put to commercial or strategic uses involving vital interests of both the state conducting the research and the state off whose shores it may be conducted.

The Canadian position on management of its coastal resources requires controls to ensure that research related to those resources is used for the benefit of Canada. This does not imply arbitrary restrictions on research by foreign vessels in waters under Canadian jurisdiction. It does mean, however, that Canada and other coastal states must have the right to be notified of and participate in research conducted off their coasts, and must have full access to the data collected. With this kind of cooperation from the researching agency, the coastal state can actually assist research, for example, by extending port facilities to research vessels and their scientific staff.

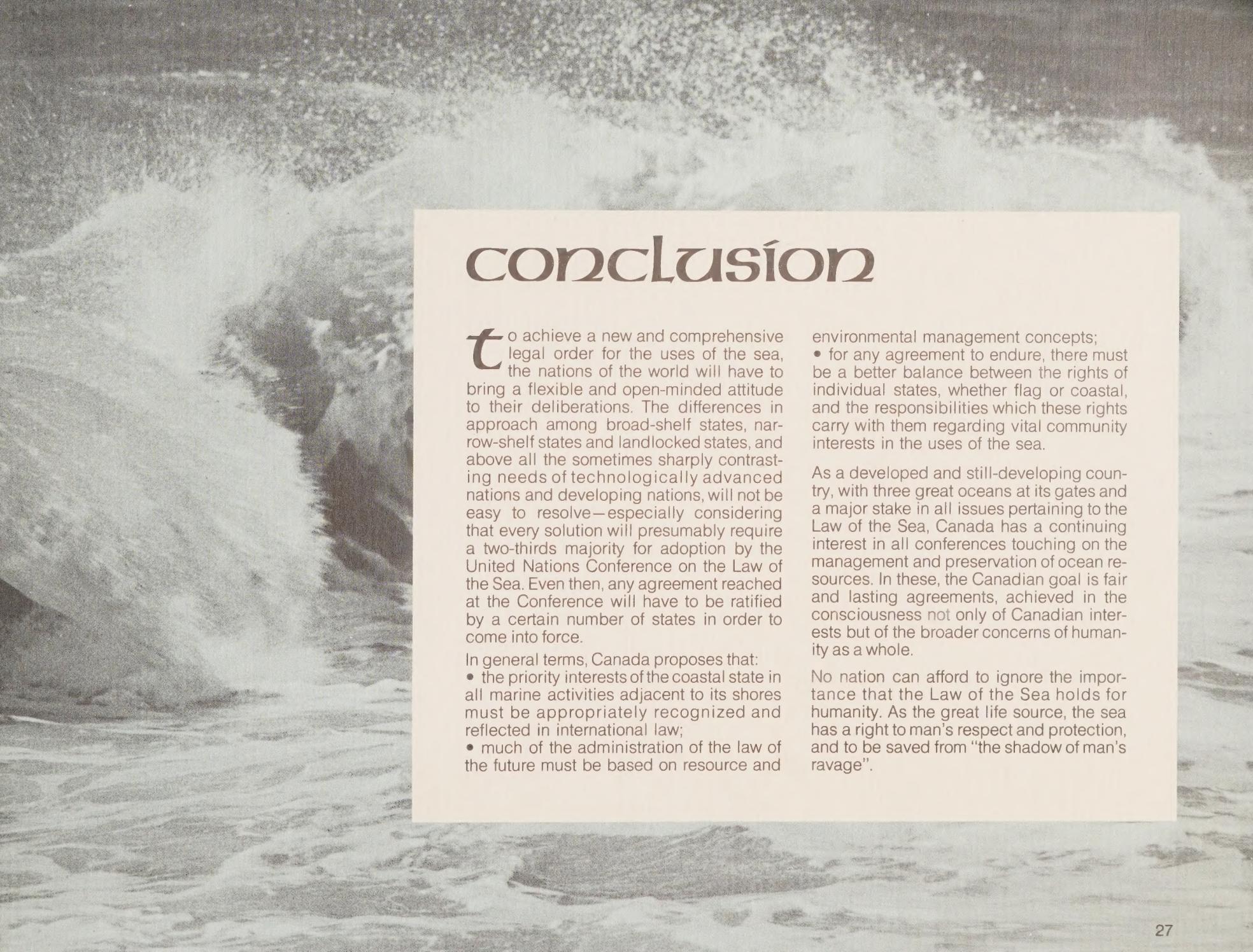
However, if the purpose or modalities of research by a foreign vessel in waters under the jurisdiction of a coastal state are unacceptable to that coastal state for economic, security, environmental or other legitimate reasons, it must have the right to disallow such activities.

There will undoubtedly be difficulties in reaching agreement on this point. Some-what similar safeguards for the coastal state are already embodied in the 1958 Convention on the Continental Shelf, but their application has given rise to considerable disagreement. Again the Canadian view is that an accommodation of interests is necessary, taking into account both the legitimate concerns of the coastal state and the responsibility of all states to facilitate the growth of man's knowledge of the marine environment from which life emerged and upon which life depends.



MARINE SCIENTIFIC RESEARCH VESSEL C.G.S. "BAFFIN" 25





# conclusión

To achieve a new and comprehensive legal order for the uses of the sea, the nations of the world will have to bring a flexible and open-minded attitude to their deliberations. The differences in approach among broad-shelf states, narrow-shelf states and landlocked states, and above all the sometimes sharply contrasting needs of technologically advanced nations and developing nations, will not be easy to resolve—especially considering that every solution will presumably require a two-thirds majority for adoption by the United Nations Conference on the Law of the Sea. Even then, any agreement reached at the Conference will have to be ratified by a certain number of states in order to come into force.

In general terms, Canada proposes that:

- the priority interests of the coastal state in all marine activities adjacent to its shores must be appropriately recognized and reflected in international law;
- much of the administration of the law of the future must be based on resource and

environmental management concepts;

- for any agreement to endure, there must be a better balance between the rights of individual states, whether flag or coastal, and the responsibilities which these rights carry with them regarding vital community interests in the uses of the sea.

As a developed and still-developing country, with three great oceans at its gates and a major stake in all issues pertaining to the Law of the Sea, Canada has a continuing interest in all conferences touching on the management and preservation of ocean resources. In these, the Canadian goal is fair and lasting agreements, achieved in the consciousness not only of Canadian interests but of the broader concerns of humanity as a whole.

No nation can afford to ignore the importance that the Law of the Sea holds for humanity. As the great life source, the sea has a right to man's respect and protection, and to be saved from "the shadow of man's ravage".

Here the winds blow,  
And here they die,  
Not with that wild, exotic rage  
That vainly sweeps untrodden shores,  
But with familiar breath  
Holding a partnership with life,  
Resonant with the hopes of spring . . .

E. J. Pratt,  
*Collected Poems*,  
Second edition (1962),  
MacMillan of Canada, Toronto.

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